

DTIC FILE COPY

13

AD-A217 210

PHASE I ARCHAEOLOGICAL RECONNAISSANCE FOR HISTORIC  
PROPERTIES WITHIN THE PEORIA LAKE  
ENVIRONMENTAL MANAGEMENT PROGRAM, HABITAT  
REHABILITATION ENHANCEMENT PROJECT,  
WOODFORD COUNTY CONSERVATION AREA,  
CHILLICOTHE, ILLINOIS

Prepared for

Stanley Consultants, Inc.  
under Rock Island Corps of Engineers  
Contract No. DACW25-89-D-0018

DTIC  
ELECTE  
JAN 26 1990  
S D

Prepared By

American Resources Group, Ltd.  
Carbondale, Illinois

Authors

Michael J. McNerney  
Steve Titus  
Jeffrey D. Anderson

DISTRIBUTION STATEMENT A.  
Approved for public release  
Distribution Unlimited

October 1989

90 01 25 0 46

PHASE I ARCHAEOLOGICAL RECONNAISSANCE FOR HISTORIC  
PROPERTIES WITHIN THE PEORIA LAKE  
ENVIRONMENTAL MANAGEMENT PROGRAM, HABITAT  
REHABILITATION ENHANCEMENT PROJECT,  
WOODFORD COUNTY CONSERVATION AREA,  
CHILLICOTHE, ILLINOIS

Prepared for

Stanley Consultants, Inc.  
under Rock Island Corps of Engineers  
Contract No. DACW25-89-D-0018



Prepared By

American Resources Group, Ltd.  
Carbondale, Illinois

Authors

Michael J. McNerney  
Steve Titus  
Jeffrey D. Anderson

Accession For	
NTIS	<input checked="checked" type="checkbox"/>
DTIC	<input type="checkbox"/>
Other	<input type="checkbox"/>
By	
Date	
A-1	

October 1989

# ABSTRACT

Approximately 190 acres of land within the floodplain of the Illinois River in extreme northwestern Woodford County, Illinois, were the subject of a Phase I archaeological and geomorphological investigation. No significant historic properties were identified, and it is recommended that the proposed Peoria Lake Environmental Management Program, Habitat Rehabilitation Enhancement Project, proceed without further historic properties evaluation. (P)

## TABLE OF CONTENTS

Abstract . . . . .	i
List of Figures. . . . .	iii
Introduction . . . . .	1
Environmental Setting. . . . .	5
Archaeological and Historical Records and Literature Review. . . . .	8
Methods. . . . .	12
Results of Geological Investigation. . . . .	13
Introduction. . . . .	13
Bedrock Units . . . . .	16
Drainage Development. . . . .	16
Preglacial Drainage. . . . .	16
Quaternary Drainage Development. . . . .	16
Geomorphological Investigation Methodology. . . . .	19
Field Investigation. . . . .	19
Field Results . . . . .	20
Trench 1 . . . . .	20
Trench 2 . . . . .	22
Trench 3 . . . . .	22
ST1. . . . .	25
ST2. . . . .	25
Conclusion. . . . .	25
Summary and Recommendations. . . . .	26
References Cited and Bibliography. . . . .	29
Appendix A: Scope of Work. . . . .	31
Appendix B: Correspondence . . . . .	32

## List of Figures

1. Location of study area. . . . .	2
2. Location of archaeological/geomorphological study areas . . . .	3
3. The natural divisions of Illinois . . . . .	6
4. Location of study areas from plat book of Woodford County, 1893. . . . .	7
5. Southeastern tip of Chillicothe Island with FWMU in distance. .	9
6. Shoreline of Chillicothe Island . . . . .	9
7. Forested Wetland Management Unit, Woodford County Conservation Area (from USDA 1963 aerial photograph). . . . .	10
8. Forested Wetland Management Unit, Woodford County Conservation Area . . . . .	14
9. Backhoe trench. . . . .	15
10. Backhoe trench. . . . .	15
11. Glacial and drainage history of Illinois and Wisconsin. . . .	17
12. Trench 1 profile. . . . .	21
13. Trench 2 profile. . . . .	23
14. Trench 3 profile. . . . .	24
15. Buried International Tractor Model 60 . . . . .	27

PHASE I ARCHAEOLOGICAL RECONNAISSANCE, PEORIA LAKE ENVIRONMENTAL  
MANAGEMENT PROGRAM, HABITAT REHABILITATION ENHANCEMENT PROJECT,  
WOODFORD COUNTY CONSERVATION AREA

Introduction

The Rock Island District, U.S. Army Corps of Engineers, in cooperation with the Illinois Department of Conservation, is proposing to construct a barrier island in the Upper Peoria Pool, restore the East River channel, and construct a moist soil Forested Wetland Management Unit within the Woodford County Conservation area in extreme northwestern Woodford County on the east bank of the Illinois River (Figure 1).

The Rock Island, U.S. Army Corps of Engineers, in cooperation with the Illinois Department of Conservation, is proposing to construct: 1) a barrier island in the upper Peoria Pool, 2) East River Restoration, and 3) a moist soil Forested Wetland Management Unit (Figure 2). This project is a part of the Environmental Management Program which was established by PL 99-662 to enhance and rehabilitate the Upper Mississippi River system.

The proposed plan for the East River excavation and barrier island construction consists of excavating soil/sediment using a large clamshell bucket (4-6 cu. yards) with gentle adjacent placement using several phases (as needed for stability) to construct a low-level 20 to 25 acre elongated island. The excavation method of large bucket and gentle placement has been used successfully by southern states in tide reclamation areas.

The East River restoration will allow rooted plant establishment, restore flowing side channel habitat, and provide reliable food sources

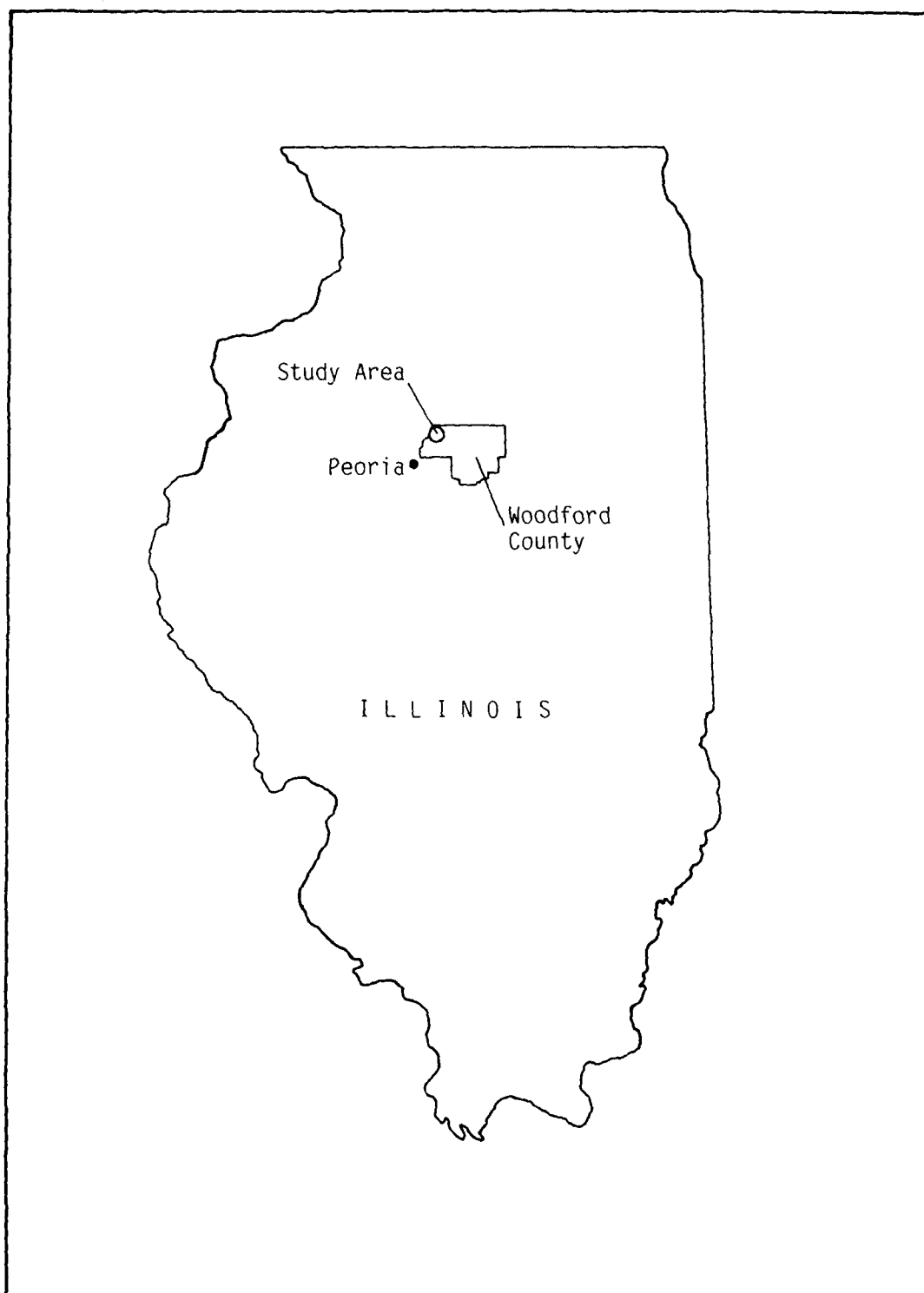
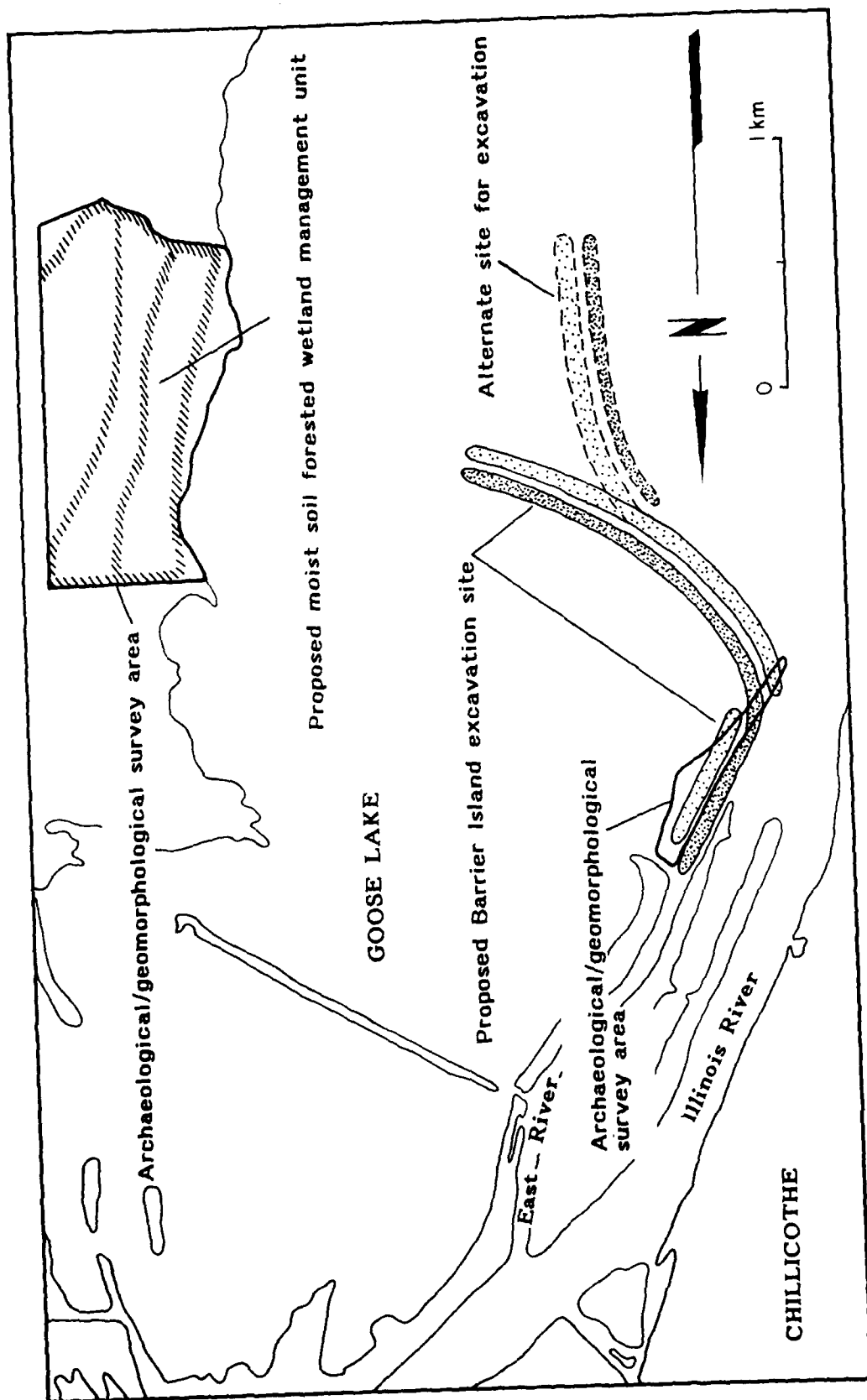


Figure 1. Location of study area.



Feature 2. Location of archaeological/geomorphological study areas.



for migratory waterfowl. An existing silt plug will be removed to reestablish flow through the East River channel. The cut removed is envisioned to be approximately 200 ft wide by 6 ft deep and 1,500 ft in length--a total excavation of nearly 67,000 sq. yards. Dredge material will be side cast on the east bank of the East River.

The general purposes of the Forested Wetland Management Unit is to provide an approximately 130 acre wave free water area to enhance waterfowl habitat and provide reliable food sources during migratory periods. This design features a tiered, 3-cell arrangement with a levee alignments following existing topography constructed by adjacent barrow. This design will maximize the amount of shallow water (2 ft or less) surface area that can be realized during operation of the unit. A well will be located on the upland side of the restoration area.

Correspondence with the Illinois Historic Preservation Agency dated June 6, 1989 (IHPA LOG #89052603) stated that no documented sites are located within the project area. However, a historic property is located .5 mi upriver from the proposed project area. The State Historic Preservation Office (SHPO) also recommended a Phase I archaeological survey be conducted as a part of the Section 106 compliance process.

The objective of this Phase I archaeological/geomorphological survey was to identify prehistoric and historic properties and to determine the potential for deeply buried archaeological resources. Authorization for these investigations is provided by the National Historic Preservation Act (as amended in 1980), the Archeological and Historic Preservation of 1974, Executive Order 11593, and Title 36 of the Code of Federal Regulations, Parts 60-66 and 800 as appropriate.

Archaeological and geomorphological investigations were carried out from September 25-28, 1989. Supervising Archaeologist/Principal Investigator was Michael J. McNerney, assisted by Steve Titus. Jeff Anderson conducted the geomorphological investigations.

#### Environmental Setting

Woodford County is contained within the Till Plains section of the Central Lowland Physiographic Province. A relatively large physiographic section, the Till Plains covers most of Illinois and portions of five other states and is characterized by a landscape created by glaciation (Fenneman 1938:449).

Two natural divisions are represented in Woodford County--the Grand Prairie Division and the Upper Mississippi River and Illinois River Bottomlands Division (Figure 3).

The Grand Prairie Division occupies the level to rolling uplands west of the Woodford County Conservation Area. Rich soils formed from glacial and loess deposits formerly supported tall grass prairie. Forests were restricted to stream valleys and moraines.

The study areas are located in the Illinois River Bottomlands Division. Before the construction of the dams and channelization of tributary streams, the area was characterized by broad floodplains, meandering streams, gravel terraces, and backwater lakes (Figure 4).

Bedrock is deeply buried by soils consisting of recent alluvium and glacial outwash. These soils are alkaline to slightly acidic, vary from sandy to clayey, and supported bottomland forests consisting of silver maple, American elm, green ash, sycamore, and willow. Lock and dam construction and tributary stream channelization, with their associated

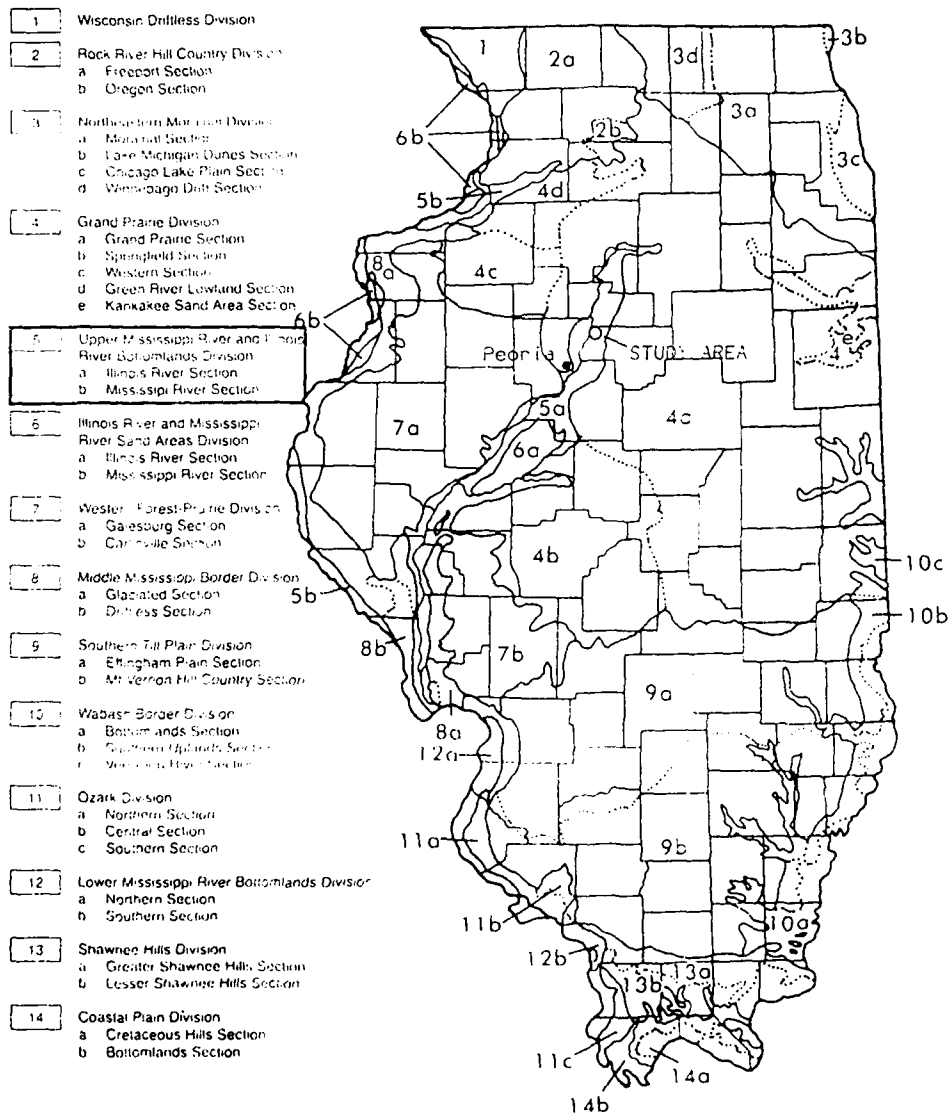


Figure 3. The Natural Divisions of Illinois (From Mohlenbrock 1986).

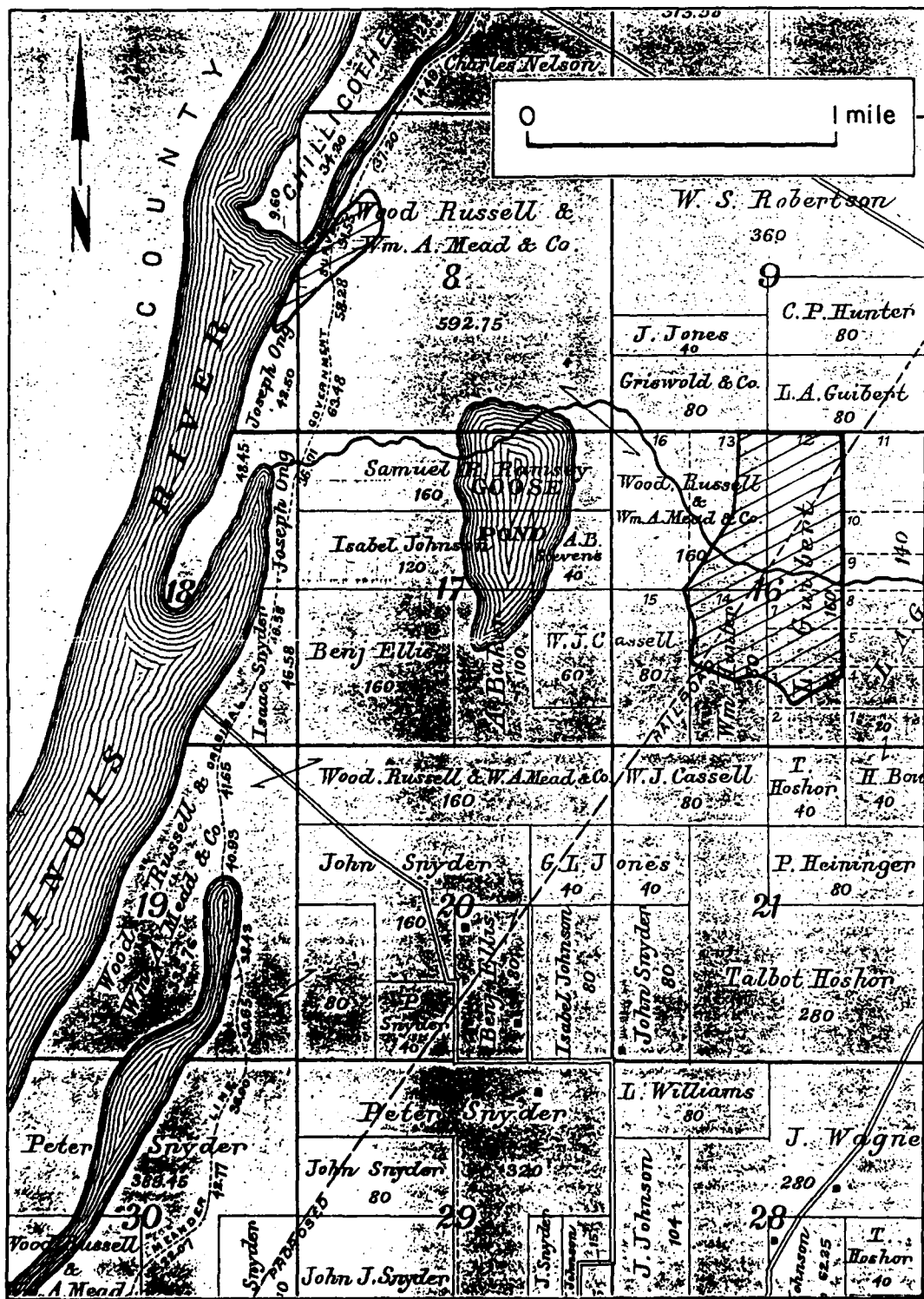


Figure 4. Location of study areas, from plat book of Woodford County, 1893.

siltation, have drastically altered the original valley and brought about the need for this Habitat Rehabilitation Enhancement Project.

Archaeological and geomorphological investigations were conducted at two locations--the southeastern tip of Chillicothe Island and a portion of the eastern half of section 16, T28N, R3W (Figures 2, 5, 6).

The southern tip of the island is a low (440 ft-445 ft ASL), narrow spit of recent alluvium covered with willow and a few maple trees surrounded by only 1 ft of water. The shallow water required raising the boat motor and poling into the island.

A 190 acre tract on the east bank of Peoria Lake was also investigated. This proposed Forested Wetland Management Unit (FWMU) ranges in elevation from 440 ft-452 ft ASL. It is subject to annual flooding, primarily between February and May; however, water may cover portions of the tract for short periods of time whenever heavy rains occur within the drainage.

At the present time, vegetation consists of silver maple, sycamore, ash, and willow along with a variety of grasses, weeds, and vast stretches of poison ivy. The southeast corner of the tract was under cultivation until 1965 and is now covered with silver maple (Figure 7).

#### Archaeological and Historical Records and Literature Review

Although the Illinois River Valley is well known for its rich prehistoric archaeological resources, many of which have been the subject of major investigations for more than 70 years (Fowler 1985), there have been no major archaeological excavations in the immediate vicinity of the Woodford County Conservation Area. However, it will be useful for this study to examine prehistoric settlement patterns in the



Figure 5. Southern tip of Chillicothe Island with FWMU in distant background looking east.



Figure 6. Western shoreline of Chillicothe Island looking north.



Illinois River Valley as a means of assessing the potential for undiscovered archaeological resources in a floodplain environment.

Prehistoric archaeological sites of the Illinois River Valley are commonly located on bluff tops, on toe slope terraces at the junction of the bluff and floodplain, and on low alluvial terraces within the floodplain (Esarey 1988; Harn 1980; Houart 1971).

The most relevant archaeological work relating to this study is an archaeological survey of the banks of the Illinois River from Naples to Peoria Lock and Dam conducted by archaeologists and volunteers from the Dickson Mounds Museum (Esarey 1988). Carried out during the extremely low water levels of 1988, the survey recorded 136 sites ranging in age from 600 B.C. through the historic period. These sites occupied former natural levees and were most intensively used from 400-100 B.C. (Early Woodland period) and from A.D. 600-1000 (Late Woodland period).

During the summer of 1989, the shoreline survey was continued above the Peoria Lock and Dam to Starved Rock Lock and Dam. Surveyors found that the east shore of Lake Peoria was too low and wet for pedestrian survey (Duane Esarey, personal communication 1989). However, upstream from the present survey area two archaeological sites were located. A Mississippian-Late Woodland occupation, the Douglas Lake site, was recorded on the east bank of the main channel approximately 2 mi north of FWMU at river mile 181.

The Fisher Slough site was identified at river mile 190.5 just north of Lacon in Marshall County. Surface artifacts included three waste flakes and a gray gunflint; the latter may relate to historic Potawatomi occupations in the area during the late eighteenth and early



nineteenth centuries (Esarey 1988). The suggestion of a historic Potawatomi relationship for the Fisher Slough site may be well founded.

Just 1 1/2 mi northeast of the Woodford County Conservation offices, a stone monument next to Route 26 marks the site of Potawatomi chief Black Partridge's village. In September of 1812, Illinois militiamen attacked the village, drove off the women and children, killing several, and burned the settlement (Temple 1966:139).

Observations made during the Dickson Mounds Museum survey of 1988-89 indicate that sloughs, creek entrances, side channels, and lake shores are too heavily silted for surface examination, while river currents and wave action along the main channel exposed sites (Duane Esarey, personal communication 1989).

A search of historic maps, atlases, aerial photographs, and county histories as well as interviews with Woodford County Conservation personnel and local farmers indicated that there have never been permanent historic occupations in the survey areas within anyone's memory (see bibliography).

#### Methods

Following a records and literature review, pedestrian survey and geomorphological testing was conducted at both FWMU and Chillicothe Island. Two surveyors spaced 15-20 m apart excavated shovel tests 35-45 cm deep at 15-20 m intervals in the higher elevations of FWMU. Prehistoric settlement data indicate that in lowland environments, sites will tend to be located on slightly higher ground. Further, it was obvious that as we approached Lake Peoria, soil conditions would become progressively wetter, making shovel testing difficult. Consistent

transect intervals were difficult to maintain due to dense patches of vegetation, tree falls, and dense poison ivy thickets. This procedure was followed until water began to fill up shovel tests between the 445 ft and 444 ft contours (Figure 8). These wet conditions, along with geomorphological evidence from backhoe trenches indicating several feet of recent alluvium, made it obvious that further shovel testing was inappropriate. The remainder of the FWMU was carefully examined but not shovel tested.

Investigations on the island included reconnaissance survey and soil corings.

Three backhoe trenches were excavated as a means of examining the geomorphology of the FWMU (Figures 8, 9, and 10) and determining the potential for deeply buried archaeological sites. This approach is the most effective method of evaluating buried site potential in alluviated settings.

## Results of Geological Investigation

### Introduction

The study area shows considerable depth of recent historical alluvium. The recent deposit occurs as laminae (laminated bands) of variable thickness, texture, and color. Sources of the historical deposits originate from Richland Creek and from the Illinois River. Below the recent deposits lie a presettlement soil developed under wet, poorly-drained environmental conditions. Based upon the geologic study, the potential impact upon cultural deposits in the study area appears very low.

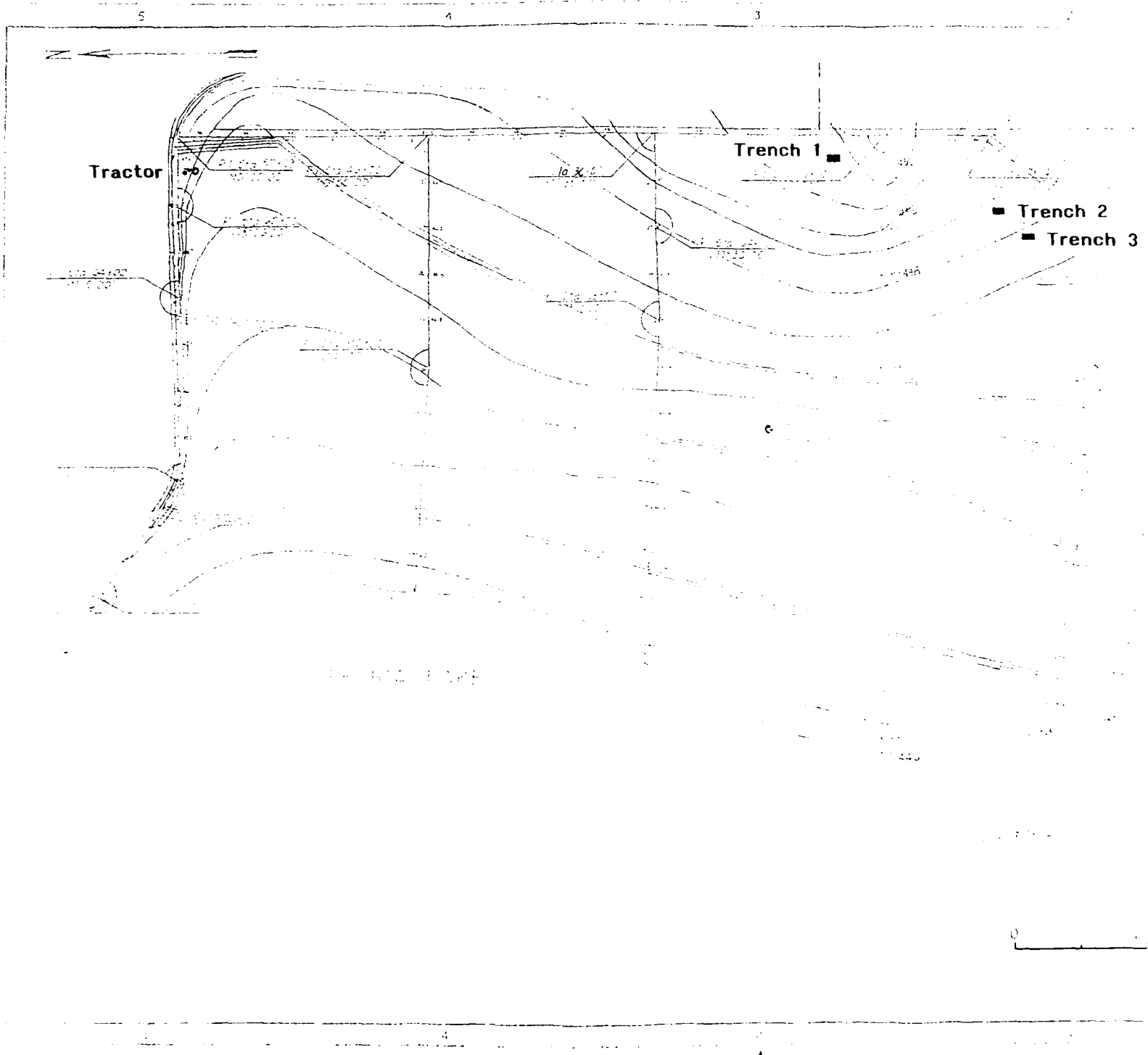
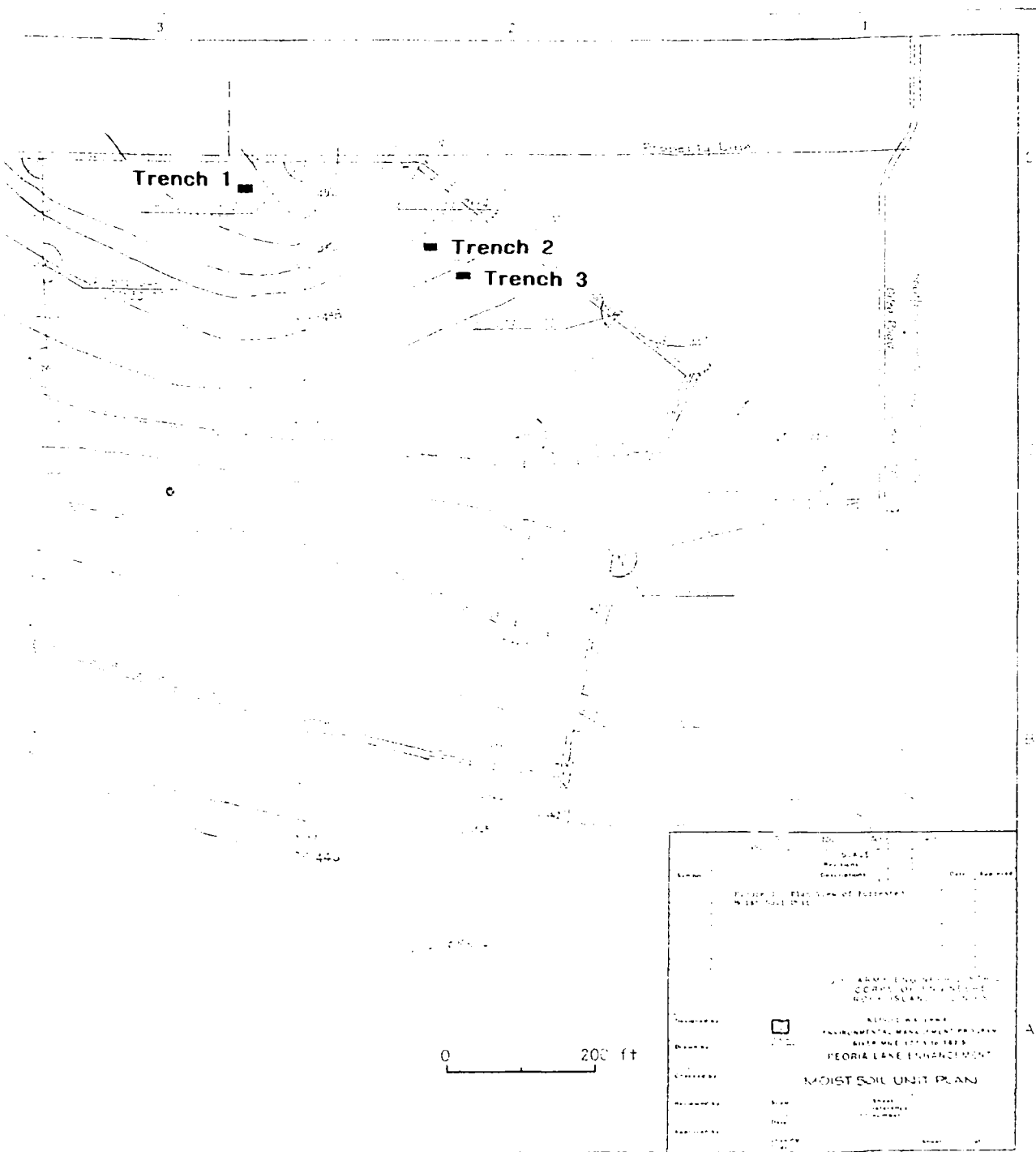


Figure 8. Forested wetland management unit. Woodford County Conservation Area.



y Conservation Area.



Figure 9. Backhoe trench.



Figure 10. Backhoe trench.

### Bedrock Units

The project area lies within the margin of the Bloomington Ridged Plain Physiographic Division (Horberg 1950). Typical bedrock units shown along the Illinois River Valley contain sedimentary rock from the Pennsylvanian System (Horberg 1950). The system includes limestone, sandstone, siltstone, shale, some coal beds, and other minor constituents (Willman and Frye 1970).

### Drainage Development

Preglacial Drainage. Several ideas have been generated regarding preglacial drainage in the Upper Mississippi/Illinois Valley (Figure 11). Horberg (1950) thought that the Mississippi preglacial drainage was through the Meridosia Channel and Princeton Bedrock Valley occupying the Illinois River Valley below Clinton, Iowa. However, Willman and Frye (1970) suggested that Mississippi River drainage became established following classical Nebraskan (Pre-Illinoian) glaciation. Their argument, based on upland gravelly outwash, is that the Mississippi Valley must have had significant erosional development between classical Nebraskan and Kansan (Pre-Illinoian) glacial advances (Willman and Frye 1970).

Quaternary Drainage Development. Further obscurity remains regarding the chronology of Upper Mississippi/Illinois Valley events during classical Nebraskan glaciation around 2,000,000 years ago. Willman and Frye (1970) suggest that drainage had been established during the early Pleistocene, probably during the Aftonian. Mississippi drainage was through the Meridosia Channel and through the Princeton Bedrock Valley in north-central Illinois. Confluence with the Illinois River occurred near Hennepin and continued south through central

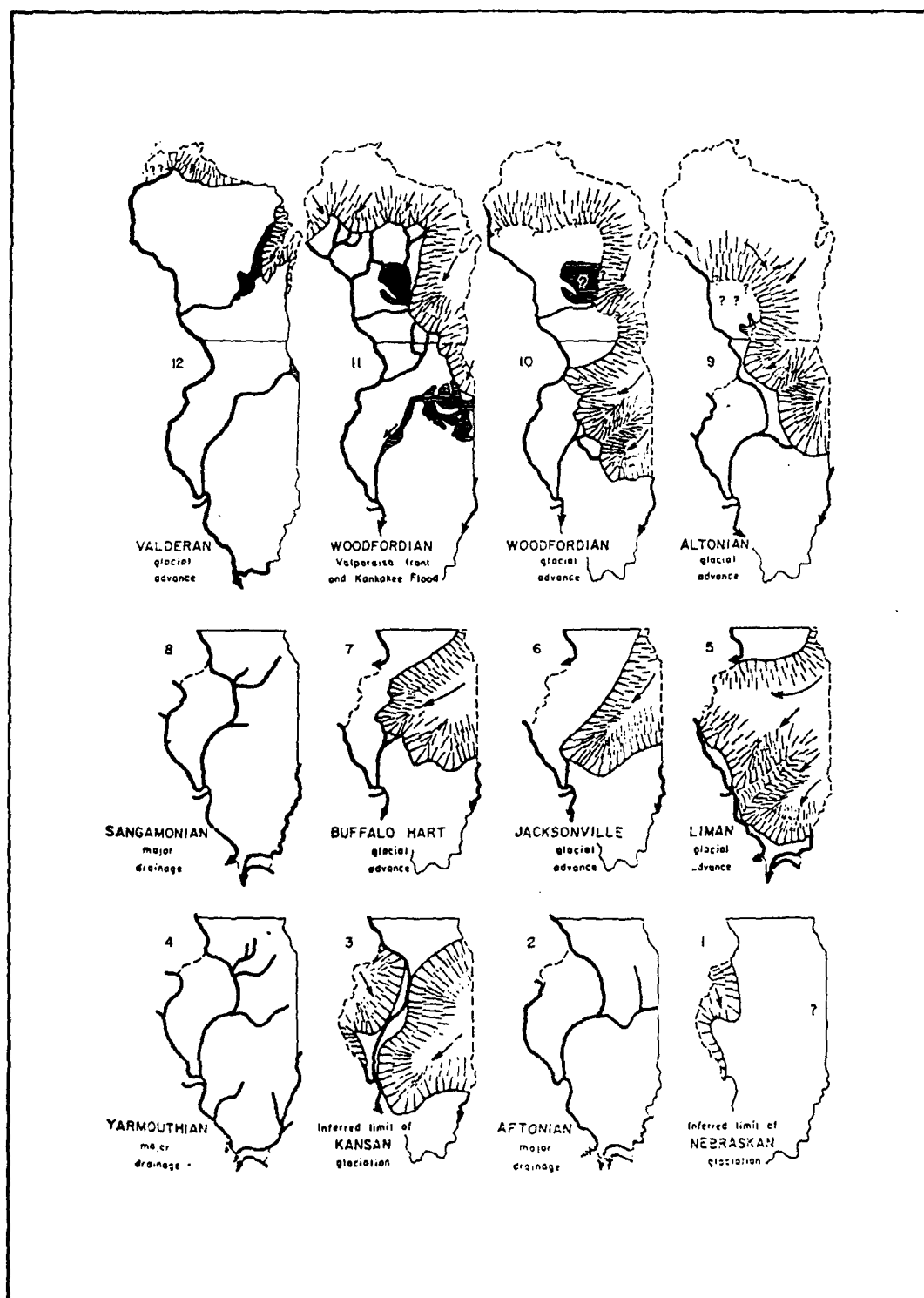


Figure 11. Glacial and drainage history of Illinois and Wisconsin (Frye et al. 1965).

Illinois, rejoining the contemporary valley near Grafton, Illinois, just north of St. Louis (Anderson 1968; Willman and Frye 1970). The middle segment of the ancient Mississippi follows the same general course as the present Illinois River Valley from Hennepin to Peoria, which includes the project area.

Major Mississippi/Illinois drainage patterns changed during Illinoian glaciation. These changes diverted the ancestral Mississippi/Illinois drainage westward. The Illinoian glacier advanced from the Lake Michigan basin into west-central Illinois, advancing over the Princeton Bedrock Valley. Following Illinoian glaciation, drainage during the Sangamon reverted back through the Princeton Bedrock Valley and into the Illinois River Valley.

The Green River lobe then advanced westward out of Lake Michigan during the early Woodfordian around 22,000 years ago. The advance of the lobe caused realignment of the Mississippi-Illinois River drainage westward. Glacial Lake Milan in western Illinois accumulated outwash and eventually topped the divide between the ancient Mississippi and the Iowa-Cedar valleys, and the Mississippi's flow was diverted to the south (Anderson 1968; Benn et al. 1988). Glacial Lake Milan was then reduced in size as the Green River lobe advanced westward. At this point, glacial lake Cordova was formed and discharged through the Port Byron Gorge at an elevation of 655 ft. Thus, the ancient Mississippi drainage through the Illinois Valley was abandoned. By about 20,000 years ago, the Mississippi was finally diverted to its present course through the Port Byron and Andalusia Gorges south of Clinton, Iowa.



Following permanent Mississippi River diversion from the Illinois River Valley, Woodfordian glacial advances covered the Illinois Valley. The Peoria sublobe of the westward advancing Lake Michigan lobe covered this portion of the Illinois Valley. When the westward advance of Woodfordian ice encountered the ancient Mississippi Valley near Hennepin, the bedrock hills diverted part of the ice southward down the valley toward Peoria. These events of Woodfordian glacial advances, retreats, and ice-front diversion occurred during the interval from 20,000 to 14,000 years ago (Willman and Frye 1970).

During moraine building episodes to the northeast, drainage from major glacial lobes were discharged into the Illinois system. These discharges were known as the Kankakee Flood where existing valleys and outlets were inadequate to accommodate the high magnitude flows. A major outlet channel along the Illinois Valley downcut to bedrock near Hennepin, but downstream the flood greatly widened the ancient Mississippi/Illinois Valley. The broad terraces along the Illinois Valley from Hennepin to Beardstown are largely erosional surfaces of the Kankakee Flood (Willman and Frye 1970).

By the end of the Woodfordian, ice had withdrawn from the headwaters of the drainage systems affecting Illinois. However, the Illinois System was still receiving episodic discharge from the Great Lakes. Major river systems, including the Illinois, ceased valley aggradation in favor of valley incision, exposing terraces along the valley margins.

#### Geomorphological Investigation Methodology

Field Investigation. The field investigation included examination of profiles from backhoe trenches and sampling tube cores. Detailed

examinations of these profiles were taken in the field. The descriptions included color, texture, structure, consistency, sorting, special features (roots, pores, voids, coatings), effervescence and/or pH, and horizon boundary. Colors of the deposits were examined and determined with the Munsell color chart. Soil reaction or effervescence was determined through the application of a 14% hydrochloric solution. Other information, including vegetation type, geomorphic surface, landscape position, elevation, and parent materials, were determined in the field. The profiles were described according to taxonomic nomenclature used by Birkeland (1984), while parent materials and weathering zones were described using terms developed by Hallberg et al. (1978) for Iowa Quaternary deposits.

#### Field Results

The field results indicate that the entire project area is covered by thick recent postsettlement alluvium (PSA) deposits. These deposits emanate from two sources: 1) local tributary deposits from Richland Creek, and 2) the main Illinois River system. The thickness of the recent deposits is from 155 to 240 cm thick. Below this, the trenches and cores show an organic-enriched wetland soil. The buried soil was developed in wetland environment based on the evidence of aquatic gastropods and other shell fragments, abundant organic material, and gleyed parent materials which indicate anaerobic conditions.

Trench 1. Trench 1 is located on the eastern portion of the project area on topographically higher ground (Figure 8). The backhoe trench profile shows thick tributary and main valley historical deposits overlying a buried wetland A-C soil profile (Figure 12). The historical unit is composed of flood laminae which vary in thickness and color,

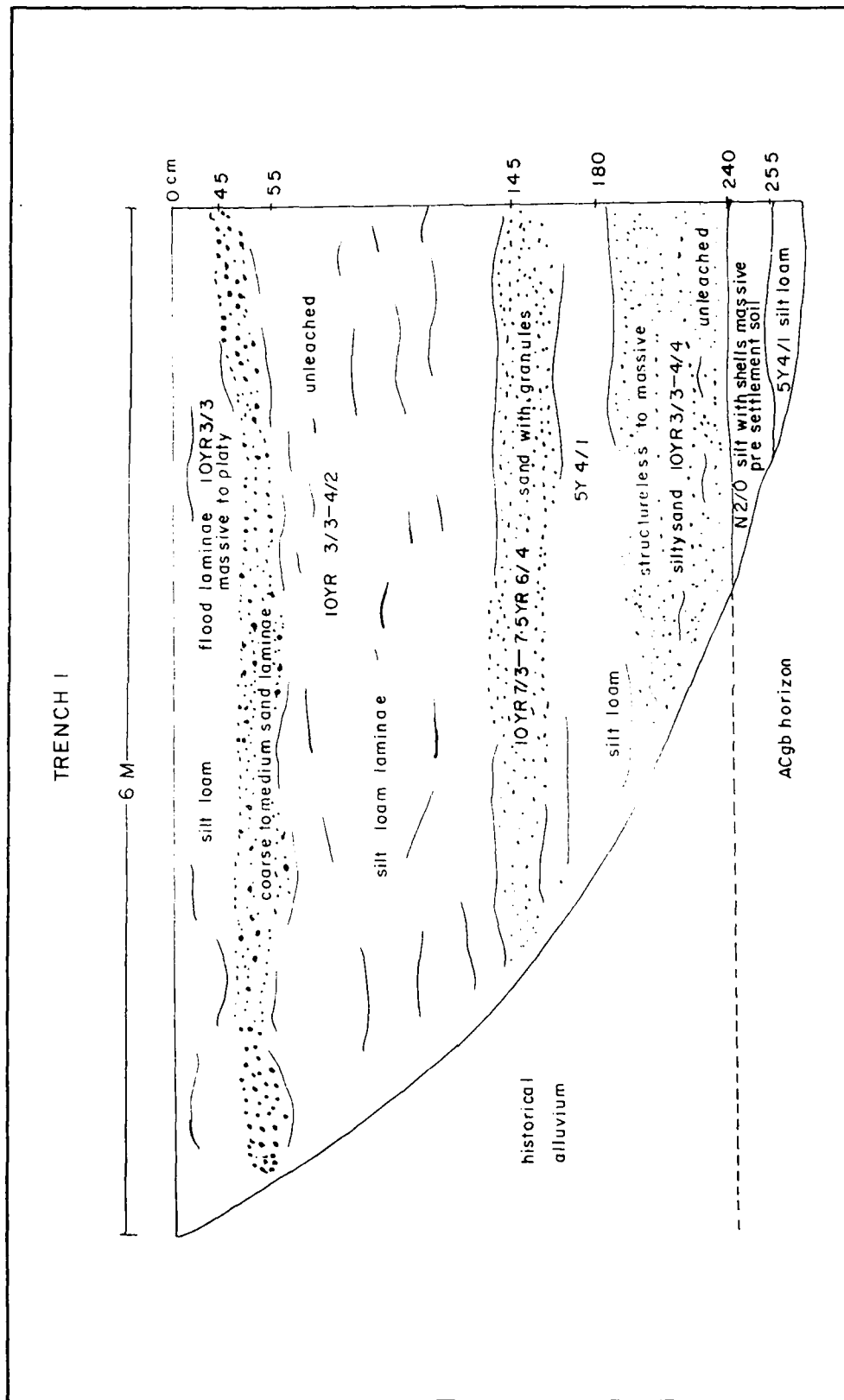


Figure 12. Trench 1 profile.

with some laminae originating from the main Illinois River channel while other laminae are of tributary origin. These thickly-bedded deposits extend to a depth of 240 cm where contact with the presettlement surface A horizon is encountered. The A horizon is black, silty, and contains gastropod shells with abundant fibric/hemic organic material. Below the A horizon is a gray, gleyed main valley deposit which suggests poor drainage and wetland characteristics.

Trench 2. Trench 2 is located south of trench 1 along the east margin of the project area. Similar to trench 1, this profile shows thick historical deposits which overlie a buried presettlement wetland soil (Figure 13). This trench shows laminae of sand, silt, and clay silt of both tributary and main Illinois River channel origin. The recent historical deposits extend to a depth of 215 cm where the buried presettlement A horizon is encountered. A sampling tube core extended the profile from 135 cm through the bottom of the trench to 275 cm. The buried A horizon shows many shells, roots, and organic vegetation, signifying wetland environment. Below the presettlement surface horizon lies fine-grained gray, gleyed deposits.

Trench 3. Trench 3 lies further south, closer to the southeast portion of the project area (Figure 14). The profile shows recent historical flood laminae from the surface to a depth of 185 cm. Below 185 cm and continuing to 230 cm is the presettlement soil composed of an A-C profile.

Similar to the other profiles, the presettlement surface was developed under wetland conditions. The historical alluvium capping the surface shows flood laminae of variable texture from coarse sand to very fine silt and silty clay. Like the other trench profiles, the

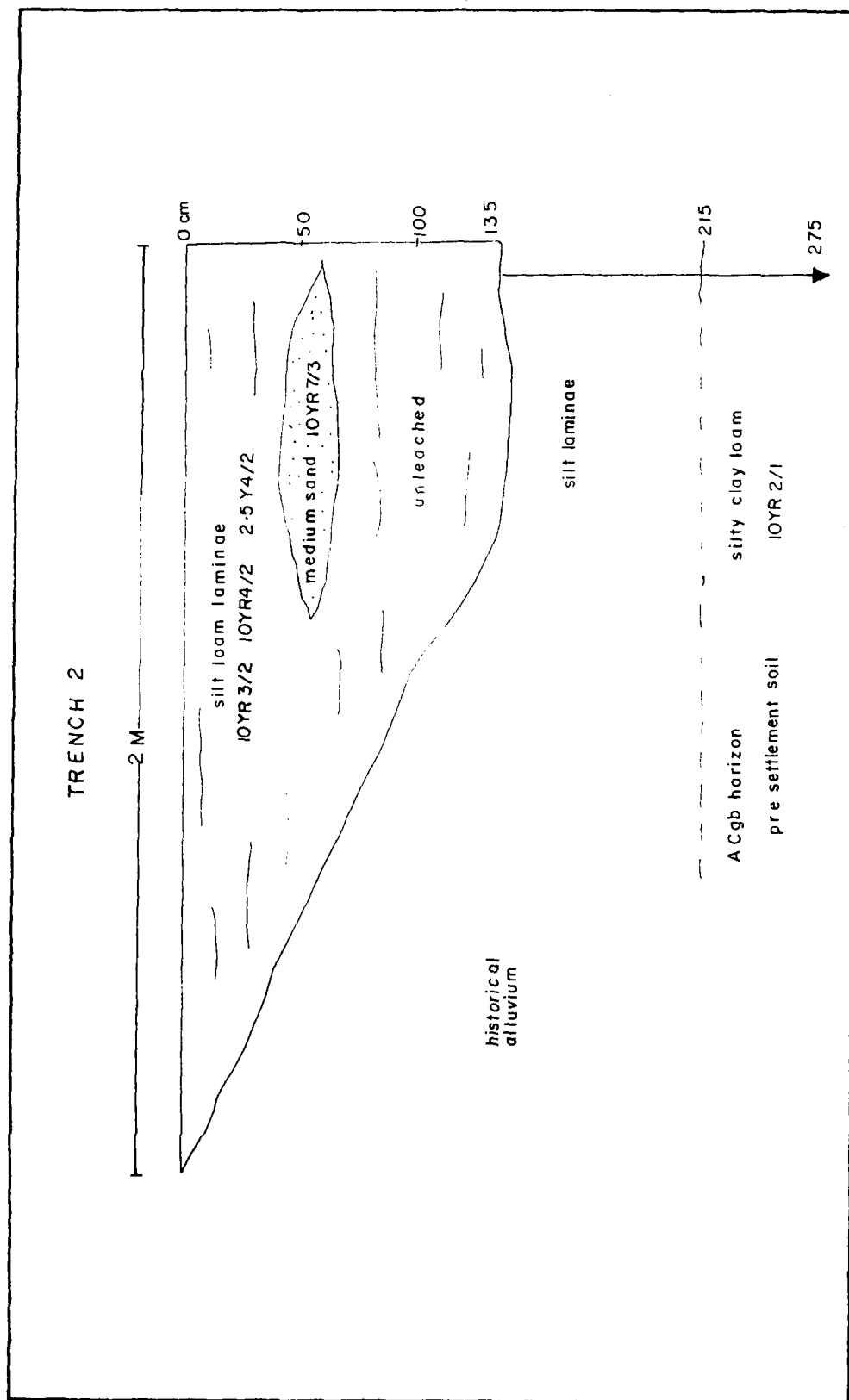


Figure 13. Trench 2 profile.

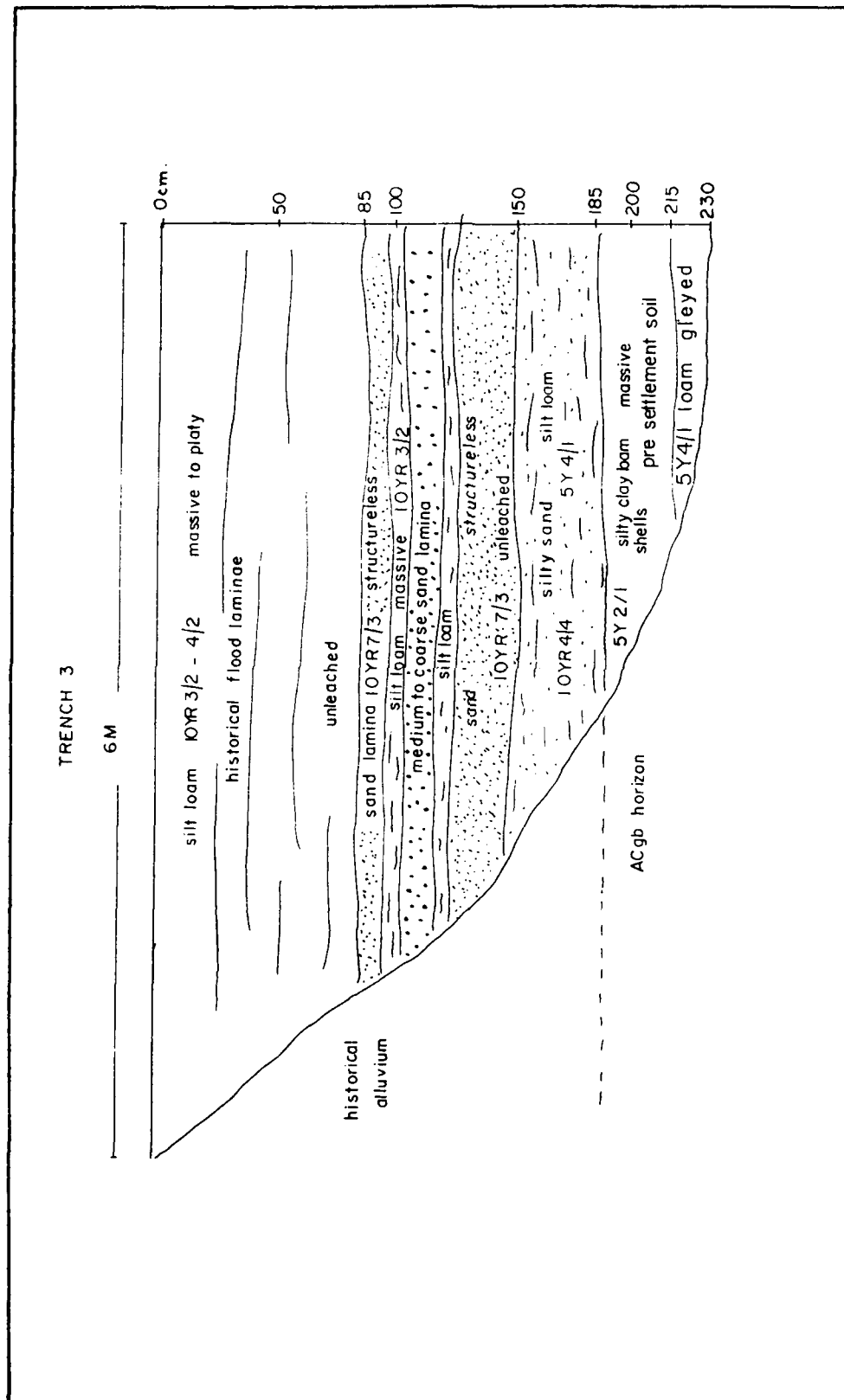


Figure 14. Trench 3 profile.

historical deposit represents sediment from both tributary and main valley origins.

ST 1. The core was taken closer to the western margin of the project area. Historical deposits extend from the surface to 155 cm and show laminae ranging from silt to medium sand. Below 155 cm lies the presettlement surface, which is very dark gray silt loam to silty clay loam. The unit contains numerous shells and oxidized organic material and, like the other profiles, represents saturated soil conditions characteristic of a wetland environment. The profile continues to 275 cm and ends in fine-grained, gleyed Illinois River deposits.

ST 2. ST 2 is located adjacent to Chillicothe Island. The core was taken about 500 m upstream from the southern end of the island. The core extended to a depth of 240 cm and was entirely composed of recent historical alluvium. The thick PSA laminae ranged in texture from fine sandy silt to silty clay loam. The laminae ranged in color from brown to gray with the finer-grained texture being gray.

#### Conclusion

The geologic investigations of the proposed Peoria Lake show extremely thick recent historical deposits capping the presettlement surface wetland soil. Sources of the historical alluvium are from Richland Creek and from the main Illinois River channel. The Richland Creek deposits are characteristically coarser grained and poorly sorted compared to the fine-grained, well-sorted Illinois River deposits. Below the historical deposits lie wetland soils composed of highly organic A horizons and underlying gleyed C horizons. The indication is that the presettlement surface was a poorly-drained wetland prior to the effects of Euro-American settlement around 1830. The effects of levee

construction, creek channelization, and lock and dam establishment on the Illinois River has rapidly aggraded the project area. Further evidence of rapid sedimentation was observed from a partially-buried International Tractor Model 60 (Figure 15). The tractor had been left in the area in the 1950s (Richard Brookes, personal communication 1989) and probably represents 2 ft of burial in approximately 30 years. Based on the geologic investigations, little, if any, potential exists for significant buried cultural resources within the margins of the project area.

#### Summary and Recommendations

Archaeological and geomorphological investigations failed to identify significant historic properties within the proposed construction areas although very limited deep testing was conducted in areas accessible to a tractor and backhoe in the FWMU. Geomorphological evidence indicates that the pre Euro-American settlement surface (1-2 m below present surface) was wet and probably not suitable for permanent prehistoric settlement. Therefore, considering the results of the records and literature review, the field investigations, and the extent of the proposed impacts, it is recommended that construction proceed without further evaluation of historic properties.

Based on the results of this study, it is recommended that the Rock Island District examine each undertaking within the floodplain of the Illinois River to determine the need for, and the extent of, historic properties investigations on a case-by-case basis.





Figure 15. Buried International tractor model 60.

The Dickson Mounds Museum surveys indicate that there are numerous archaeological sites along the river and that those areas being cut by the river current are suitable for conventional pedestrian surveys. Conversely, there are many areas like the Woodford County Conservation area and the eastern shore of Lake Peoria that are not amenable to pedestrian survey due to heavy sedimentation. These areas could be examined by reconnaissance level survey, literature and records review, examination of aerial photographs, and an evaluation of the adverse impacts of proposed projects to determine if Phase I investigations are appropriate. If PSA is deep and construction impacts limited to surface levels or shallow excavations, the Rock Island District, in consultation with the State Historic Preservation Office, may find that Phase I investigations are not necessary.

## REFERENCES CITED AND BIBLIOGRAPHY

- Anderson, R. C.  
1968 The Quaternary of Illinois, R.E. Bergstrom, ed.
- Benn, David W., E.A. Bettis III, and Robert Vogel  
1988 Archaeology and Geomorphology in Pools 17-18, Upper Mississippi River. U.S. Army Corps of Engineers, Rock Island District, under terms of Contract No. DACW25-87-C-0017.
- Birkeland, P. W.  
1984 Soils and Geomorphology. Oxford University Press, New York.
- Brookes, Richard  
1989 Personal communication. Mr. Brookes is manager of the Woodford County Conservation Area and has worked on the property for over 20 years.
- Esarey, Duane  
1988 An Archaeological Survey of the Illinois River from Naples to the Peoria Lock and Dam. Illinois State Museum Quaternary Studies Center Technical Report 88-460-10, Springfield.
- 1989 Personal communication. Mr. Esarey is a staff archaeologist at the Dickson Mounds Museum with many years of experience in the Illinois River Valley.
- Fenneman, N.M.  
1938 Physiographic Divisions of the United States. Annals of the Association of American Geographers 6:19-90.
- Fowler, Melvin L.  
1985 A Brief History of Illinois Archaeology. In Illinois Archaeology Bulletin No. 1 (Revised), edited by J. W. Porter and Dorcas S. Rohn. Illinois Archaeological Survey, Urbana.
- Geo. A. Ogle & Company  
1893 Plat Book of Woodford County, Illinois. Geo. A. Ogle & Company, Chicago.
- Hallberg, G.R., P.E. Fenton, and G.R. Miller  
1978 Standard Weathering Terminology for the Description of Quaternary Sediments in Iowa. In Standard Procedures for Evaluation of Quaternary Materials in Iowa, edited by G.R. Hallberg. Technical Information Series 8, Iowa Geological Survey, Iowa City.

- Harn, Alan D.  
1980 The Prehistory of Dickson Mounds: The Dickson Excavation. Illinois State Museum Reports of Investigations No. 36, Springfield.
- Horberg, C. L.  
1950 Bedrock Topography of Illinois. Bulletin No. 73, Illinois State Geological Survey, Urbana.
- Houart, Gail L.  
1971 Koster: A Stratified Archaic Site in the Lower Illinois Valley. Illinois State Museum Reports of Investigations No. 22, Springfield.
- Rockford Map Publishers  
1949 Farm Plat Book and Business Guide, Woodford County, Illinois, Rockford.
- Temple, Wayne C.  
1966 Indian Villages of the Illinois Country. Illinois State Museum Scientific Papers 2(2), Springfield.
- The Washburn Leader  
1920 Atlas and Plat Book of Woodford County, Illinois, Washburn.
- Willman, H.B., and J.C. Frye  
1970 Pleistocene Stratigraphy of Illinois. Illinois State Geological Survey Bulletin No. 94, Urbana.
- U.S.D.A. Aerial Photographs, Woodford County, Illinois, 1939, 1951, and 1963.
- Yates, William (editor)  
1968 The Woodford County History, compiled by the Woodford County Board of Supervisors. Pantagraph Printing and Stationery Company, Bloomington, Illinois.

Appendix A  
SCOPE OF WORK

SCOPE OF WORK FOR PHASE I ARCHEOLOGICAL RECONNAISSANCE  
FOR HISTORIC PROPERTIES WITHIN THE PEORIA LAKE  
ENVIRONMENTAL MANAGEMENT PROGRAM (EMP),  
HABITAT REHABILITATION ENHANCEMENT PROJECT (HREP)  
LOCATED IN WOODFORD COUNTY, NEAR CHILLICOTHE, ILLINOIS

I. OBJECTIVE

1.1 The purpose of this work order is to conduct Phase I archeological reconnaissance for historic properties within the Peoria Lake Environmental Management Program (EMP), Habitat Rehabilitation Enhancement Project (HREP) located in Woodford County, near Chillicothe, Illinois. Specifically, the project is located in Sections 5, 8, 9, 16, 17, and 18, Township 28 North, Range 3 West (Chillicothe Quadrangle 1972:7.5') between Mississippi River miles 178 and 181 within the Woodford County State Conservation Area and the Illinois River (Figure 1).

1.2 The work order is appropriate for American Resources Group, Ltd., Carbondale, Illinois, subcontractors to Stanley Consultants, Inc., Muscatine, Iowa under indefinite delivery contract no. DACW25-89-D-0018.

1.3 The main objective of this work order is to locate and identify historic properties present within the Peoria Lake EMP-HREP project area.

1.4 The major constituents of the work order are: 1) Phase I archeological reconnaissance sufficient to determine the location of historic properties potentially eligible to the National Register of Historic Places (NRHP) which may be affected by the construction of the barrier island, dredge placement and plug removal of the East River, and construction of the Forested Wetland Management Unit, 2) geomorphological assessment with hand coring or testing and research sufficient to document areas with little or no potential to contain historic properties, 3) documentation based upon archival sources, subsurface testing, and visual assessments sufficient to determine project impacts, 4) preparation of a high quality technical report on the archaeological and geomorphological results of the investigations which meets the Corps Scope of Work and the Illinois State Historic Preservation Office Guidelines for Archaeological Reconnaissance Surveys/Reports, and 5) if historic properties are impacted, further management suggestions for Phase II archeological testing procedures for NRHP eligibility determinations.

II. REGULATORY AUTHORITY AND REQUIREMENTS

2.1 This action is being taken in accordance with the National Historic Preservation Act (as amended in 1980), the Archeological and Historic Preservation Act of 1974, Executive Order 11593, and Title 36 of the Code of Federal Regulations, Parts 60-66 and 800 (as appropriate).

2.2 The contractor must adhere to minimum qualifications for fieldwork, reporting, and curation standards as described in the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (1984).

### III. BACKGROUND

3.1 The Rock Island, U.S. Army Corps of Engineers, in cooperation with the Illinois Department of Conservation, is proposing to construct: 1) a barrier island in the upper Peoria Pool, 2) East River restoration, and 3) a moist soil Forested Wetland Management Unit (Figure 1). See attached location map for proposed construction. This project is a part of the Environmental Management Program which was established by PL 99-662 to enhance and rehabilitate the Upper Mississippi River system.

The proposed plan for the east river excavation and barrier island construction consists of excavating soil/sediment using a large clamshell bucket (4-6 cu. yds.) with gentle adjacent placement using several phases (as needed for stability) to construct a low-level 20 to 25 acre elongated island (Figure 2). The excavation method of large bucket and gentle placement has been used successfully by southern states in tide reclamation areas.

The East River restoration will allow rooted plant establishment, restore flowing side channel habitat, and provide reliable food sources for migratory waterfowl. An existing silt plug will be removed to reestablish flow through the East River channel. The cut removed is envisioned to be approximately 200 feet wide by 6 feet deep, and 1,500 feet in length; a total excavation of nearly 67,000 sq. yds. (Figure 2). Dredge material will be side cast on the east bank of the East River.

The general purposes of the Forested Wetland Management Unit is to provide an approximately 130 acre wave free water area to enhance waterfowl habitat and provide reliable food sources during migratory periods (Figure 3). This design features a tiered, 3-cell arrangement with a levee alignments following existing topography constructed by adjacent barrow (Figure 2). This design will maximize the amount of shallow water (2 feet or less) water surface area that can be realized during operation of the unit. A well will be located on the upland side of the restoration area.

3.2 Correspondence with the Illinois Historic Preservation Agency dated June 6, 1989 (IHPA LOG #89052603) stated that no documented sites are located within the project area. However, an historic property is located .5 upriver from the proposed project area. The State Historic Preservation Office (SHPO) also recommended a Phase I archaeological survey be conducted as a part of the Section 106 compliance process.

#### IV. SPECIFICATIONS

4.1 A literature search will be conducted to provide a prehistoric and historic overview pertaining to the immediate area. If applicable, the literature search will include, but not necessarily be confined to, archaeological site reports, plat books, atlases, maps, county histories, and other relative documentation.

4.2 The Contractor will hand excavate, soil probe, and/or use heavy equipment necessary to investigate the subsurface potential for buried cultural resources. Examination of existing maps and geomorphological data should precede the detailed field investigations. The excavation strategy will be dictated and justified by the Contractor in the draft and final reports.

4.3 The Contractor shall discuss the general implications of the documentary and geomorphological results within the framework of site management. The majority of the geomorphological analysis shall be limited to field interpretation with only very limited lab analysis. The geomorphological investigations shall be conducted in support of the detailed archeological interpretation and determination of site integrity and stratigraphic limits. The geomorphologist shall also be responsible for identifying and documenting accreted, degraded, and other recent land forms having no potential for historic properties.

4.4 The Contractor shall provide a sufficient level of investigation (documentary, archeological, and geomorphological) for the Rock Island District Staff Archeologist and the Illinois SHPO to assess the potential for the proposed project areas to contain significant archeological and architectural sites. Both historic and prehistoric sites will be addressed. Complete legal descriptions will be provided, along with any photographs or illustrations necessary to support the Contractor's conclusions and site evaluations (area and artifacts). New sites shall be reported to the Illinois SHPO and Office of State Archaeology (OSA) on appropriate forms. The Rock Island District shall receive copies of these forms with the final report, but not included within the report, as this information is not for public purview. All sites shall be plotted on U.S.G.S. topographical maps and submitted with the final report.

4.5 The Contractor shall make recommendations for any Phase II testing that may be necessary to determine the NRHP eligibility of each resource encountered as well as indicate the condition of the resource and potential impacts. The Contractor shall also indicate those resources that will require no additional investigations. A formal determination of eligibility is not a requirement of this work order. However, any resource which can be clearly evaluated as eligible or not eligible for listing on the NRHP should be evaluated and included in the report recommendations to avoid any unnecessary visitation to the proposed project area.



## V. REPORT

5.1 The Contractor shall prepare a draft and final technical reports on the investigation and results according to the specifications described in Section IV. Depending upon length and appropriateness, the Contractor's report or portions therein, may be included or cited within the District's documents. This action shall in no way preclude the Contractor from independent publication or use of data upon completion of the project. Any project related publications, articles, or use of the report data will reference the Rock Island District.

5.2 A brief letter report detailing the preliminary field results with initial management options for a Phase I no effect or continued Phase II archaeological testing/mitigation shall be provided to the Rock Island District seven (7) days after completion of the field work.

5.3 The Contractor shall provide a high quality descriptive and interpretive report to contain, but not necessarily be limited to the following: 1) abstract, table of contents, list of figures, introduction, project description, excavation (strategy, methodology, and justification), environmental background (geomorphology, physiography, and ecology), archeological and archival background with cultural/temporal outline and previous projects search, artifact analysis, further management recommendations, bibliography, site photo log, artifact inventory, and illustrations as required.

5.4 Three copies of a final draft report shall be submitted to the Contracting Officer for review. The draft report will be complete and finalized when submitted. The Rock Island District anticipates a 30-day review period, for the Corps, SHPO, and necessary parties, to review the final draft report and to supply comments for consideration in the final report. However, this anticipated review period is only provided for general scheduling and the Rock Island District reserves the right to any extension of the review period.

5.5 Upon approval of the draft report and receipt of notice from the Contracting Officer, the Contractor shall prepare (adhering to the comments) and submit 15 copies and 1 reproduction ready master of the final report. A copy of any software which was used to write and edit the report shall also be submitted.

## VI. CURATION

6.1 It is the responsibility of the contractor that artifacts or cultural materials collected, notes, photographs, one final report, or other data generated during the performance of contract services shall be curated at one accredited curatorial facility for preservation or alternative curatorial placement facility agreed upon by Rock Island District and the Illinois SHPO. All of these materials remain the property of the Government and can be made available for interpretive programs, additional research, or any other purpose upon written request and approval from the Rock Island District. It remains the Contractor's responsibility to safeguard all of this material and to provide a archival catalogue system and/or artifact accession inventory to facilitate access and to confirm that all storage units be marked "Property of the U.S. Government, RID Corps of Engineers". The Contractor's cost estimate shall reflect artifact and material permanent storage/curation. Storage and curation must be in the state where the artifacts were recovered and the state site is provided. Confirmation of the curation requirements must be submitted to the Contracting Officer.

## VII. COST PROPOSALS

7.1 The Contractor shall submit a, detailed cost proposal for the subject work order to the Rock Island District within 7 days.

## VII. PROJECT SCHEDULE

8.1 The following Project Schedule shall apply, unless the Contractor submits an accelerated schedule for consideration as part of the proposal:

---

### PROJECT SCHEDULE

---

Tasks	Calender Days
Award	0
Fieldwork	10-20
Letter Report	27
Analysis and Report Preparation	21-39
Flex Time	40-50
Draft Report Due	51
Review Period	52-82
Final Report Due	100

---

This is the maximum acceptable time frame for project execution and completion. There is a possibility for limited modification within the schedule for specific tasks upon approval of the Contracting Officer. Ten (10) days of flex time is figured in the general schedule and may be made available to the contractor upon request based on unanticipated delays to the project execution resulting from weather and flooding.

8.2 The payment schedule will be based upon completion of major tasks:

---

PAYMENT SCHEDULE

---

Tasks	Percent of Total Payment
1) literature search	10
2) fieldwork	75
3) draft submittal	90
4) final report submittal	100

---

8.3 It is anticipated that the fieldwork will require two archeologists 10 days and one Geomorphologist approximately 5 days.

IX. COORDINATION

9.1 The Contractor shall provide a Monthly Progress Report throughout the contract period. The Contractor shall notify District Archaeologists Ron Deiss at 309/788-6361, Ext. 349, directly before the fieldwork begins and after the field has been completed. The District staff may require a field orientation trip once sufficient progress has been made; hence, the Contractor shall also notify the District when fieldwork has reached a stage that a visit would be most beneficial. The Contractor shall also coordinate all schedules with the Illinois Department of Conservation, Woodford County State Conservation Area Site Manager Dick Brookes at 309/822-8861.

End

Appendix B  
CORRESPONDENCE



REPLY TO  
ATTENTION OF:

DEPARTMENT OF THE ARMY  
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS  
CLOCK TOWER BUILDING—P.O. BOX 2004  
ROCK ISLAND, ILLINOIS 61204-2004

December 7, 1989

Planning Division

Mr. Michael J. McNerney  
American Resources Group, Ltd.  
127 North Washington  
Carbondale, Illinois 62901

Dear Mr. McNerney:

We have enclosed the review comments for the draft report entitled Phase I Archaeological Reconnaissance for Historic Properties within the Peoria Lake Environmental Management Program, Habitat Rehabilitation Enhancement Project, Woodford County Conservation Area, Chillicothe, Illinois, prepared for Stanley Consultants, Inc. under Rock Island District, U.S. Army Corps of Engineers Contract No. DACW25-89-D-0018.

The subject report also was provided to the Illinois State Historic Preservation Office for review. These independent reviews, as well as Rock Island District comments, should be addressed in preparing the final report. The draft is high quality and the final report will undoubtedly stand as a valuable contribution to historic archeology.

We also have included a draft copy of the report entitled Upper Mississippi River System - Environmental Management Program Definite Project Report (R-6) With Integrated Environmental Assessment, Peoria Lake Enhancement dated October 1989 to aid in the final report preparation. We look forward to receiving the final report.

If you have any questions concerning the independent reviews and Rock Island District's comments and corrections, please call Mr. Ron Deiss at 309/788-6361, Ext. 185, or write to the following address:

District Engineer  
U.S. Army Engineer District, Rock Island  
ATTN: Planning Division  
Clock Tower Building - P.O. Box 2004  
Rock Island, Illinois 61204-2004

Sincerely,

J. Paul VanHoorebeke  
Authorized Representative  
of the Contracting Officer

Enclosures



**Illinois Historic  
Preservation Agency**

Old State Capitol • Springfield, Illinois 62701 • (217) 782-4836

217/785-4997

WOODFORD COUNTY  
Peoria Lake Enhancement  
Environmental Management Project  
Chillicothe

IHPA LOG #89040304 (89052603)

November 30, 1989

Mr. J. Paul VanHoorebeke  
Authorized Representative  
of the Contracting Officer  
District Engineer, US Corps of Engineers  
Rock Island District  
Clock Tower Building  
Post Office Box 2004  
Rock Island, Illinois 61204-2004

Dear Sir:

Thank you for requesting comments from our office concerning the possible effects of the project referenced above on cultural resources. Our comments are required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties".

Our staff has reviewed the report titled "Phase I Archaeological Reconnaissance For Historic Properties Within The Peoria Lake Environmental Management Program, Habitat Rehabilitation Enhancement Project, Woodford County Conservation Area, Chillicothe, Illinois" by Michael J. McNerney, Steve Titus, and Jeffrey D. Anderson.

The Phase I survey and assessment of the archaeological resources appear to be adequate. No archaeological material was recorded within the boundaries of the proposed Peoria Lake Environmental Management Program, Habitat Rehabilitation Enhancement Project. Accordingly, we have determined, based upon this report, that no significant historic, architectural, and archaeological resources are located in the 190 acre project area.



**Illinois Historic  
Preservation Agency**

Old State Capitol • Springfield, Illinois 62701 • (217) 782-4836

---

Page 2

J. Paul VanHoorebeke Letter  
Peoria Lake Enhancement - Chillicothe  
November 30, 1989

We do recommend that the report be revised to include a more thorough description of the project activities with appropriate project maps.

Please retain this letter in your files as evidence of compliance with Section 106 of the National Historic Preservation Act of 1966, as amended.

If you have any further questions, please contact Paula G. Cross, Staff Archaeologist, Illinois Historic Preservation Agency, Old State Capitol, Springfield, Illinois 62701, 217/785-4998.

Sincerely,

Theodore W. Hild  
Deputy State Historic  
Preservation Officer

TWH:PGC:bv

cc: Bill Callahan

Project Review Comments

11/21/89

Project: Peoria Lake EMP

Location: Chillicothe, IL

Reviewer: Ron W. Deiss

Comment Number	Page	Comment	Action
1	ii	Include a project description as required by report requirements (5.3) in the scope of work. Focus on the background section as described in the scope of the work. Within the project description chapter, there should be an illustration of the proposed EMP Project including the East River excavation, barrier island, and forested wetland unit.	Change
2	4	Paragraph 6 - Include township and range with Section 16.	Change
3	11	Paragraph 3, Sentence 1 - Name the parcels.	Modify
4	11	Paragraph 4 - Defend and describe the methods archeologically.	Modify
5	13	Paragraph 1 - Defend and describe the methods archeologically.	Modify
6	28	Bibliography - In the personal communication references, include the title of person, level of expertise, and topic of conversation.	Modify
7		After incorporating the comment actions into the report, the author will have met the Corps scope of work. Generally, the report was well written and well documented.	None



Project Review Comments

November 29, 1989

Project: Peoria Lake

Location: Chillicothe, IL

Reviewer: Ron Pulcher

Comment Number	Page	Comment	Action
Gen.		Include a copy of the Scope of Work and relevant correspondence in the final report.	
1	1	No map in the report shows the location of the proposed barrier island and associated channel excavations. A good map of the project area would perhaps make up for the lack of verbal description of the proposed project.	
2	17	Line 10: Reword sentence to clarify meaning.	
Gen.		Judging from the maps attached to the Scope of Work, paragraph 1.1 of the scope should probably read "in Sections 7, 8, 16, and 17" rather than "in Sections 5, 8, 9, 16, 17, and 18."	